

Notice of Allowability

Application No.

09/932,883

Examiner

Ling-Siu Choi

Applicant(s)

GOYAL ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to the Amendment after Final filed 08/09/04.
2. ☐ The allowed claim(s) is/are 1-58.
3. ☐ The drawings filed on 20 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is in response to the Amendment and the Declaration of Goyal et al., both being filed August 9, 2004. Claims 1-58 are now pending.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Kenneth H. Johnson on September 10, 2004.

3. The application has been amended as follows:

Claim 1, line 8, change "catalyst from" to --catalyst is from--.

Allowable Subject Matter

4. Claims 1-58 are allowed.
5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest reference: Berardi et al. (EP 0

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595 574 B1).

The present invention relates to

improvement	controlling the feed of a aluminum-containing cocatalyst to the reactor to provide 10-50 ppm of aluminum from the cocatalyst based on the polymer production rate
	maintaining the molar ratio of total Al (catalyst + cocatalyst) / Ti from a supported Ziegler-Natta catalyst from 25 to 80
in a gas phase polymerization of ethylene and 0-20 weight % of one or more comonomers in the presence of the catalyst comprising the cocatalyst selected from the group consisting of tri-C ₂₋₆ alkyl aluminum, alkyl aluminum halide and mixtures thereof.	

(summary of claim 1)

Berardi et al. disclose a gas phase process to prepare a polyolefin in the presence of a supported Ziegler-Natta catalyst comprising a granular support, an organosilicon compound, a dialkylmagnesium, a trialkylaluminum compound, a monochloro organic compound, and a tetravalent titanium compound, wherein the trialkylaluminum is preferred to be triethylaluminum or triisobutylaluminum; the olefin can be 1-butene, 1-hexene, or 4-methyl-1-pentene (col. 5, lines 27-31; col. 6, lines 41-44 and 53-55; claims 1 and 7-8). Attention is drawn to Example 12 (b), wherein "35 millimols of trimethylaluminum and a quantity of catalyst prepared previously, coresponding to 0.33 millimols of titanium, were introduced into the reactor" (col. 15, lines 3-5). Accordingly, $Al / Ti = 35 / 0.33 = 106$. However, Berardi et al. do not teach or fairly suggest a gas phase ethylene polymerization process comprising controlling the feed of cocatalyst to the reactor to provide 10-50 ppm of aluminum from the cocatalyst based on the polymer production rate while maintaining the molar ratio of Al (catalyst +cocatalyst) / Ti

(catalyst) from 25 to 80.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

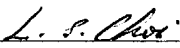
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

September 15, 2004

**LING-SUI CHOI
PRIMARY EXAMINER**


Ling-Siu Choi, Ph.D.
Primary Examiner
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